DOCUMENT RESUME

ED 060 967 RC 001 733

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TITLE What Can Be Done for Rural Gifted Children and Youth.
PUB DATE 3 Jul 67
NOTE 22p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Charts; Counseling Programs; Creativity; *Educational Coordination; *Gifted; *Guidelines; Institutional Role; Instructional Materials; *Rural Education; *Rural Youth; Social Influences; Tables (Data); Teacher Education; Underachievers
IDENTIFIERS Projects to Advance Creativity in Education

ABSTRACT

An attempt to define some parameters and to establish guidelines for the education of rural gifted children and youth is presented in this report. Parameters of access discussed include access to experiences and environments; in addition, the relationships among some of these parameters are shown in chart form. Also examined are the roles of Projects to Advance Creativity in Education (Title III, Elementary and Secondary Education Act [ESEA] of 1965), institutions of higher education, and other agencies in the coordination of applications for funds under various titles of the ESEA and of the National Defense Education Act. Methods of identifying underachieving gifted students and motivating gifted children are listed, and some existing rural programs for the education of the gifted child are described. (PS)

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What Can Be Done for Rural Gifted Children and Youth

By

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California State Department of Education
July 3, 1967

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"There are practically no research [studies] and almost no guidelines relevant to the provision of special education programs for youth in geographic areas characterized by great space and few people."

"Administrators of special education services in these regions face the problem of providing programs for exceptional children without well-developed guidelines defining methods for establishing such services. The more remote the region, the more complex the problem becomes." [1]

These sobering thoughts suggest that to date no man or organization has the final answer to this problem. Nevertheless we might attempt to define some of the parameters of this problem and establish some guidelines. What provisions can we make for children in the upper 2-5 percent of general mental ability who live on farms and in rural communities?

Gifted-child education in sparsely populated areas is a matter of identifying and placing children in appropriate learning situations. The key words are "identification," "placement," "access," "involvement," "motivation," "acquiring higher aspirations," and "receiving individualized instruction and opportunities for independent learning." Crucial factors are: guidance, small-group counseling, individual counseling, tutoring, seminar programs, and independent study. Access involves exposure to and immersion in a responsive, organized, and meaningful learning environment.

Parameters of access include access to experiences and environments. There must be access to persons, ideas, materials, and equipment. (See figures I-VI). "Projects to Advance Creativity in Education"[2] may well become key instruments for providing this access through transportation, voice transmission, voice and image transmission, correspondence, and exemplary programs and ideas that can be field tested, refined, and installed in rural areas.

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[1] "Special Education Services in Sparsely Populated Areas: Guidelines for Research", A Report on the National Research Conference on Special Education Services in Sparsely Populated Areas, March 28-31, 1966.

[2] Title III, Elementary and Secondary Act of 1965.

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PACE personnel, personnel from institutions of higher education, personnel from offices of county superintendents of school, and personnel from school districts may aid in this task by coordinating applications for funds under the various titles of the Elementary and Secondary Education Act of 1965 and of the National Defense Education Act. These same persons may help to recruit resource persons who can give practical help to teachers, counselors, and administrators and who can both augment and help to upgrade the resources and competencies of county staff personnel. The first letters of the words "experiences," "persons," and "ideas" spell EPI. We might think of PACE centers as "EPI centers"--focal points for program development and improvement. They can provide access to experiences, environments, persons, ideas, material, and equipment through transportation of persons, shipping material and equipment, voice transmission, voice and image transmission, and correspondence.

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Transportation

The transportation of persons involves taking gifted children to gifted children, to gifted adults, to special learning environments, and to cultural sources. It might be by car, jeep, bus, railroad (regular or logging), light plane, helicopter, boat, airline, or even trail.

Transportation could be provided for the purposes of reaching sources of involvement, motivation, interest, exploration, raising aspirations, individualizing instruction and learning, guidance, and self-understanding. Other purposes served are: (1) Finding models of exemplary adults--persons who are exemplary as human beings, as thinking individuals, as creators, and as career leaders; and (2) Finding models of other children who have adapted to and who flourish in cities. These may be children who have overcome some of the factors inhibiting learning and development in rural areas, developed broad interests, benefited by being with other gifted children and gifted adults, raised their levels of aspiration, and whose current achievement is rather remarkable considering their isolation and/or cultural deprivation.

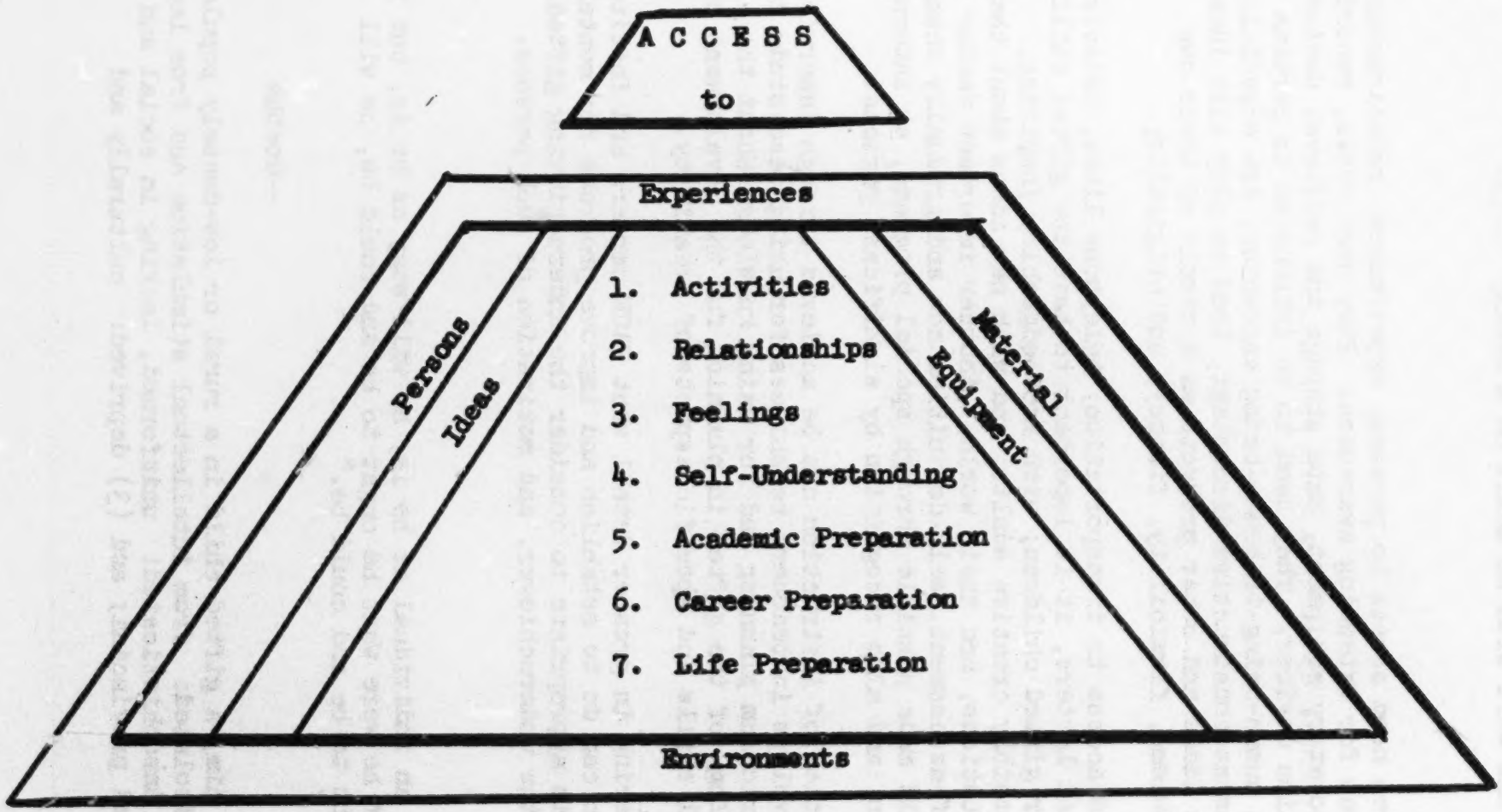
Voice and Image Transmission

Voice transmission is probably best accomplished through telephone lines and recording tape. Voice and image transmission can be accomplished through educational television; slides and correlated recording tapes; 8 mm films and recording tapes, slides or motion picture films plus synchronized recording tapes, and phonograph records; and/or telephone conversations. Also important may be the use of pictures, photographs, and charts, together with recording tapes, records, and telephone equipment.

Correspondence

Not to be overlooked as a means of transmitting ideas is correspondence with other gifted children, with gifted and talented adults, and with a

Figure I


ACCESS
to
Experiences
Persons
Ideas
1. Activities
2. Relationships
3. Feelings
4. Self-Understanding
5. Academic Preparation
6. Career Preparation
7. Life Preparation
Material
Equipment
Environments

sponsor or mentor. Correspondence courses are also effective means of transmitting knowledge and ideas, especially when the child has an opportunity to discuss his work with an adult on a weekly basis.

Summary

Gifted children need access to persons, experiences, relationships, materials, and ideas for extending awareness. They need books, records, learning kits, laboratory equipment, data storage and retrieval devices, and data manipulation devices. They need to be introduced to persons who can meet them in a human-being-to-human-being encounter, are especially knowledgeable, possess constructive discontent, tend to play with ideas, and who create new ideas and other products as a result of their own sensitivity to problems, flexibility, fluency, and originality.

In addition to access to transportation, telephone lines, television, recording tapes, and letters, it is important to have the gifted child involved with other gifted children; with knowledgeable, inspiring, empathetic, and possibly creative adults; and with new ideas about themselves, school, vocations, and their world. Another important factor is motivation for self-assessment, self-definition now and gradually changing in an expanded world made possible through special programs, an internal locus of evaluation, and also recognition by significant persons.

Individualization of instruction can be achieved through inservice education which develops in teachers techniques for using case-study data as a basis for curriculum planning and for using knowledge about the traits of the typology of the gifted in planning for the development of higher intellectual skills and specific aspects of creativity.

Before considering in greater detail what PACE centers and institutions of higher education can do to establish and improve programs for mentally gifted minors, it is appropriate to consider the underachieving gifted, identification of the underachiever, and motivation of such persons.

The Underachiever

"If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be."

--Goethe

When you find him, a gifted child in a rural or low-densely populated area may be: (1) isolated: from intellectual stimulation and from learning resources; (2) unsophisticated: uninformed, lacking in social and learning skills, and provincial; and (3) deprived: culturally and educationally.

You may be able to value him as a human being who is open to a range of learning experiences; new relationships; new experiences; and exploration of himself, his environment, and his world. Here may be an individual who has had many opportunities to reflect and who is free from psuedo-sophistication. Such a person may also have special understanding of nature and have established meaningful relationships with his natural environment.

Underachieving gifted students may sometimes be noted by traits of perseverance, association, creativity, speed of learning, problem solving, ability to abstract, and the nature of questions asked. Note how he responds to open-ended questions and problems that have no right or wrong or just one answer. Some of these traits may be observed in the process of individual testing. Others may be observed in the regular classroom or while he is talking with or playing with friends. Helpful, too, are reports from parents on early development and learning, indications of wide range of interests (possibly many of them undeveloped), and discontent with drill. This person may be restless, bored, lacking in tact in criticizing others, and possibly very critical of himself. There may be a tendency for him to associate with older children and adults.

Many of the gifted are thought to be underachievers when seen in terms of their own potentialities. This may be for a host of reasons ranging from educational deprivation to sibling and parent relationships or to ridicule and hostility sometimes shown them by insecure teachers and chronological peers.

Some methods of motivating the gifted child are:

1. Provide opportunities to play with, experiment with, and to compete with intellectual peers.

2. In a playful, free, accepting environment, encourage expressions of feeling, clarification of ideas, divergency of thought, and originality.

3. Develop skills of thinking and communication skills.

4. Provide a refuge for his thoughts and be a mentor.

5. Encourage development of interests and exploration.

6. Provide guidance-oriented counselor and/or teacher time in which the emphasis is on human-being-to-human-being relationships and in which each values the other and gains help in exploring the parameters of his existence.

7. Entrap these children with creative materials, interesting books, experimental equipment, audio-visual materials, and independent study.

8. Encourage experimentation and hobbies.

9. Emphasize ideas.

10. Do not evaluate every act and every product.

11. Provide time within the school day for ideas to incubate.

12. Possibly, just as the final bell is about to ring at the end of the school day, send verbal thorns into his mental flesh--ideas with which he will have to grapple overnight or over a weekend.

13. Make it possible for the child to plan gradually where, with whom, and for what purposes he will spend part of each school day.

Dr. Paul R. Ackerman did a study of the significance of "a consultant-teacher for the gifted" in rural areas.[3] Almost all of the rural gifted children in the Ackerman study were underachievers. They were provided with a resource room in which they carried out projects during two-hour blocks of time and under the supervision of a person who was a teacher-consultant of the gifted. The children were given two seminars. These emphasized academic planning and skill-building and provided students with an opportunity to examine such topics as "How Knowledge Progresses" and "The Tools of Achievement." Part of the time of the teacher-consultant was spent with an independent studies program. The rest of the time was spent in assisting teachers to enrich their classes for gifted students.

The study also showed that independent study should follow an initial period of structure and discipline and that remediation of academic background and study skills is necessary before attempting to have an integrative curriculum. In order to establish rapport and to reduce professional resistance to a program such as this, it was necessary to have an intensive inservice education program involving the teacher, consultant, and the faculty.

What PACE Centers and Institutions of Higher Education Can Do To Establish and Improve Programs for Mentally Gifted Minors

Pace Centers

Some suggestions that indicate how personnel from institutions of higher education and from PACE Centers might exert leadership in the area of talent development and gifted children education are:

1. Explore the area of gifted child education with groups of interested administrators. Develop multi-county regional approaches for planning and conducting programs for these children in sparsely populated areas.

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[3] Ackerman, Paul R., "Demonstration of the Significance of a Consultant-Teacher for the Gifted to a Small-Rural Secondary School" Final Report. (Washington, D.C.: Cooperative Research Project No. S-088, U.S.O.E., 1966).

2. Confer with personnel from school districts regarding identification procedures and provide a cooperative task-force approach (1) for locating gifted and talented children and youth; (2) for counseling these children and their parents; (3) for advising school administrators, and (4) for inservice education of teachers and teacher training.

3. Prepare packets for administrators which contain such things as suggested goals, identification procedures, research techniques, suggestions for administrative planning, and curriculum suggestions. See Figures VI and VII.

4. Work with school districts in preparing teaching guides, special kits, and other resource materials.

5. Develop a roster of resource persons who are available to teachers and students.

6. Explore possibilities of ESEA planning and operational grants which might dovetail with the state gifted child or talent development programs.

7. Establish demonstration situations in districts in the region.

8. Produce educational television programs on great ideas and on other suitable topics, and develop tele-lecture and tele-teaching techniques.

9. Conduct summer workshops for teachers who are selected to teach in pilot situations.

10. Sponsor a newspaper on creative ideas, creative teaching, and how to foster creativity in children.

11. Prepare or help districts purchase special kits--for example, those dealing with concept development, literature enrichment, or reading improvement.

12. Help in the selection of books for children with searching minds and creative thoughts.

13. Promote the use of high school and college correspondence courses.

14. Develop cooperative-contractual summer schools for the gifted which focus on cultural improvement, skill development, independent study, and research.

15. Develop and coordinate the seminar program for high school students which would involve scientists, businessmen, physicians, engineers, military personnel, forest-management and river-management personnel, and college personnel.

16. Promote Saturday programs for students who live in isolated areas. These programs might provide certain material and equipment, resources, opportunities, and special personnel that could not be available during the week.

17. Build public understanding through county fair exhibits, PTA councils, service organizations, and newspaper articles.

18. Portray the positive effects which special provisions for the gifted often have upon the total educational program. Help district personnel develop or become competent in using procedures for evaluating programs.

In addition to the suggestions just made, PACE Centers, institutions of higher education, and school districts might consider the advisability of exchanges of library materials; pupil exchanges; and an open-ended, enriched, team teaching program in which teachers are used as specialists and in which pupils are not confined to the usual grouping in mathematics and reading. Study the possibility of bringing gifted and talented children (underachievers or achievers) into group-guidance summer programs or into other programs in which they are allowed to explore ideas in the presence of intellectual peers and in which they have the chance to examine some of their own thinking about themselves and their world. Consider the feasibility and desirability of conducting tele-teaching seminars--originating on college campuses--in which "great books" are analyzed from different perspectives by a social psychologist, anthropologist, historian, literary critic, and/or scientist. Tele-teaching seminars could be coordinated with periodic meetings of these students on a campus of an institution of higher education. Other ideas to consider might be the provision of dial-access to data, to courses, and to materials of cultural enrichment. We might also want to consider the use of Title I ESEA funds which, according to a House Committee Report No. 143 definitely included the gifted in such areas as identification, enrichment, and provision of certain cultural programs. There may be need to assist in the coordination of Title I, II, and III aspects of ESEA. Possibly we might examine Title III projects from other school districts and from other states. Project Prometheus from Oregon would be an example of another Title III elementary program of value to children from rural areas. Pace Centers and Offices of County Superintendents of Schools are in a strategic position to promote multi-district and possibly multi-grade instructional and counseling programs. These Centers and Offices are able to mobilize the resources for planning and implementing "total approaches to full development of human potential."

Institutions of Higher Education

Although ideas as to "what institutions of higher education might do" were incorporated in some of the above suggestions, it might be appropriate to mention that colleges and universities have made special contributions to talent development through providing special programs for intellectually gifted youth, use of equipment and facilities, teacher training and in-service education, summer workshops, laboratory schools, Title V NDEA

Guidance Workshops focusing upon techniques for counseling and guiding gifted and highly gifted children, provision of resource and consultant personnel, and research and experimentation in motivation, learning theory, instructional procedure, appropriate material, and structure of groups.

Institutions of higher education might become regional bases for scanning research and practice; developing model programs; cooperatively field testing these programs; revising them; and helping school districts in installing and institutionalizing these programs.[4] Schools of education might become "epicenters" for preparing model resource units and pupil materials which promote educational objectives, classroom dialog, assignments, examination questions and curricular materials that advance higher intellectual skills and specific aspects of creativity. Setting an example in this matter, college entrance examinations, undergraduate and graduate teaching, and interviews of candidates for advanced degrees might emphasize these skills and traits. Another idea is that college learning experiences be initiated at those points where previous self-initiated or high-school-led inquiry and instruction ended. Aiding this effort might be policies for advanced standing and use of college-level proficiency examinations in granting credits as well as placement in advanced sections or advanced courses.

College and university personnel might coordinate preparation and implementation of ESEA "Projects to Advance Creativity in Education;" mobilize resources to back up teachers and instructional programs; and become focal points for developing and testing "total approaches to full development of human potential." They might also develop regional counseling and guidance programs for gifted children and youth. These could provide opportunities for these children to raise their levels of aspiration and make a significant impact upon improving the sophistication of teachers and quality of education in rural areas.

Regional counseling programs might be patterned after the center developed at the University of Wisconsin and directed during the past few years by Dr. John Rothney. This center assisted in the identification, assessment, and counseling of gifted youth. These youth were allowed to visit classes at the University, to bring their own creative work to the University for criticism, and to talk with various members of the faculty. Some of the latter served as sponsors for these children. The college also assisted guidance personnel and teachers in the school from which the gifted children came.

Teacher training programs could use self assessment procedures, instruction, and internships for preparing teachers who would be cognizant of the needs and capable of developing the oftentimes latent abilities of these children. Perhaps a teacher referral service might be started which would give rural teachers immediate answers to perplexing questions about what to do for underachieving, high academic achieving, and highly creative children and youth.

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4 See Guba, Egon "A Classification Schema of Processes Related to and Necessary for Change in Education."

It should be possible to design multi-disciplinary summer workshop-demonstration-observation programs that are especially effective in preparing teachers to develop talented and gifted youth in sparsely populated areas. Joining this endeavor might be a rural sociologist, educational psychologist, and curriculum constructionist. This program would be enhanced by the requirement of an individual-teacher, consultant, or counselor project that would be of practical use in the fall.

In essence, we might say that colleges and universities can take steps to understand the uniqueness of children in the typology of the gifted, make special efforts to attract these children to college campuses, and prepare teachers who are especially well qualified to work with these children. These institutions can mobilize financial support, engage in regional planning, and conduct significant developmental activities to improve the caliber of teaching and of educational programs at elementary, secondary, and higher-education levels. More meaningful teacher preparation programs, new pupil and professional materials, and demonstration centers which foster diffusion and adoption of worthwhile innovations may result. Another important task is that of preparing program evaluators and more effective instruments for assessing gifted child programs. This cadre of evaluators and new assessment instruments might see, portray, and analyze gifted and creative youth in the full aspect of their being and encourage full development of their potentialities.

Rural Programs

1. The rural California counties of Plumas and Siskiyou have in the past offered summer group-counseling and instructional programs which have benefited gifted children by helping them and others to know themselves, develop higher career aspirations, sense the value of school, and emerge from a cocoon of underachievement. While programs such as these oftentimes are generated by sparks from a few dedicated individuals and readily fade away when these individuals are removed from the scene, they have great merit. Future attempts along this line might employ group-counseling and assessment procedures which were developed during three and one-half years of the counseling-instructional program demonstration of California Project Talent (1963-1966).

2. Weekend exploration trips such as those formerly conducted in Tuolumne County (California) were a great boon as intellectual and creative stimulation. Experts both from big cities and from the immediate environs lectured, discussed things saw on the trips, and talked with individual boys and girls. The gifted met intellectual peers (children and adults) in programs which opened up new vistas of understanding and new aspirations. On one trip, these children from a number of grades talked with a geologist from the San Francisco Bay Area the night before the field trip and on the field trip talked with and listened to the director of a fish hatchery; peered into a microscope at algae collected from fishponds; heard a psychologist who was also an expert on algae talk about a number of important

things; questioned key engineers at the construction site of the Early Intake of the Hetch Hetchy Water System--which supplies San Francisco with water; saw generators, turbines, and control devices at Cherry Power House; and listened to a forest ranger talk about the ecology of the area.

3. Some students in Fresno County (California) see and compare major ecological settings. Some very isolated gifted have exchanged places for a week with their counterparts in large city and metropolitan areas.

4. Project Prometheus, a Title III ESEA project, gives gifted students in seven southern rural counties of Oregon a six-week summer program which emphasizes development of creative leadership and a rich humanistic-social-science base for value exploration. The latter is provided by creative teachers who are carefully screened and then given free rein and maximum administrative support. "The (summer) school provided a woven matrix of experience and concept for its student population in a five-strand construct involving lecture-demonstration, conversational dialogue, inter-disciplinary classes, cultural experiences in the fine arts, and weekend tours."

5. Yakima Valley, Washington Enrichment Seminars and various Ohio Seminars give other examples and guidelines for rural program development.

6. Stanislaus County, California has emphasized a community sponsor program--a gifted adult in tune with and relating with a gifted child.

7. The PACE Center at Chico, California--is not only interested in planning and developing programs for rural gifted and talented children and youth--but has designed a complementary program to aid the regional economy. It hopes the Center for Utilization of Resources Effectively (CURE) will have a salutory impact on the economy and culture of as well as upon education in the area.

8. Mentioned above in this paper is the resource room and resource teacher program used in Kansas.

9. Because of its impact on rural underachieving gifted, a list of this nature should mention that some of the southern states have dared to think about the possibilities of residential school on a short- or long-term basis. Although this concept runs into strong philosophical and emotional opposition, initial efforts may be getting promising results.

10. In a federal publication, Talent--A State's Resource, A State's Responsibility (OE-20048; Bulletin 1963, No. 34), are listed the following efforts to provide more effective opportunities for the gifted in small schools.

> "(1) The Western State Small School Project, operative in Arizona, Utah, New Mexico, Nevada, and Colorado and financed by the Ford Foundation ($750,000 for three years), includes the establishment of provisions for the gifted in both elementary and secondary schools.

(2) The Catskill Area Project in small school design, Oneonta, New York, permits several individuals or small groups of pupils to work on different subjects at the same time, within the same room, under the guidance of the same teacher.

(3) Some countries, such as Australia, find it feasible to use two-way radios to improve educational offerings, particularly for the gifted, in remote rural areas.

(4) A proposal, not yet implemented, has been made that advanced placement courses for college credit be given by correspondence to rural school youth."

Listed above are a few promising programs. Some of the ideas and programs may deserve replicating or modifying and presenting in demonstration settings complete with electronic wizardry--and also in settings devoid of "newfangled gadgets" and which require ingenuity in the use of commonly available materials. The UNESCO Source Book for Science Teaching,[5] Kitchen Physics,[6] and other kits of correlated audio and visual materials[7] may be used in this latter approach. With a minimum of searching, the educator can locate an array of social science, science, mathematics, art, music, and English materials suitable for independent study. These might be important aspects of well-planned, sequential, and meaningful individualized programs for gifted children and youth in sparsely populated areas.

The Situation Now

There are over 100,000 gifted children in California in 262 school districts. A solid research base undergirds program prototypes, characteristics of the gifted, and program development. The latter has been aided by developmental and dissemination activity in California Project Talent, conceptual research on the human intellect and creativity, and by additional funds made available through NDEA and ESEA. Particularly important have been demonstrations of the value of a typological approach in the education of these children.

Gradually appropriate provisions for the gifted are being made in states from Hawaii to North Carolina and from Minnesota to Texas. Factors influencing program development are the work of professional organizations and the work of the members and consultants of the Council of State Directors of Programs for the Gifted.

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5 The UNESCO Source Book for Science Teaching (Paris, France: UNESCO, 1956.)

6 Kitchen Physics (Manchester, Missouri: Webster Division of the McGraw-Hill Book Company, 1966).

7 Spring - Summer Quarterly Report of Educational Services Incorporated (Newton, Massachusetts: ESI, 1966).

The Dream

Perhaps now, at last, we are coming closer toward realizing the dream of full development of human potential and of extending the creative and intellectual resources and abilities of all persons--school administrators and teachers as well as children. We are moving beyond performing roles decreed by society to an existence in which we are more rational, more creative, and more humane persons in our own right.

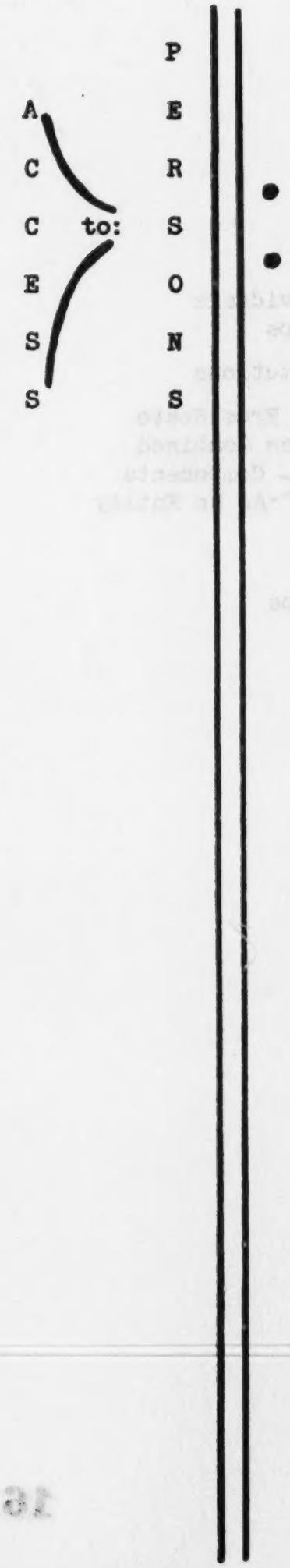
Eric Fromm has written "Most People Die Before They Are Fully Born" and "Creative Living Means to Be Born Before One Dies." To be born before we die means that we become professionals--not merely technicians. It means that we expand our awareness and our lives not merely as educators but as creative, rational, and humane persons.

Gifted children need access to an array of persons, material, ideas, experiences, and environments.

The set of charts on pages 15 to 22 may be used as a guide in appraising and locating resources and opportunities. Although a number of items are not particularly novel, taken together they suggest an approach.

The charts may be used as starting points in planning individualized and small-group instruction. They may suggest ways of proceeding in developing, improving, and evaluating instructional, guidance, and counseling programs for rural gifted children and youth.

Figure II



Intellectual Peers

1. Children
2. Adults

Exemplary Individuals

1. Creative Persons*
2. Knowledgeable
3. Inspirational
4. Career-leaders
5. Problem Solvers
   Problem Finders

Empathetic Mentors

1. Counselor
2. Community Sponsor
3. Other

Resource Persons

e.g. Forest Rangers

Engineers, Physicians

Teachers,

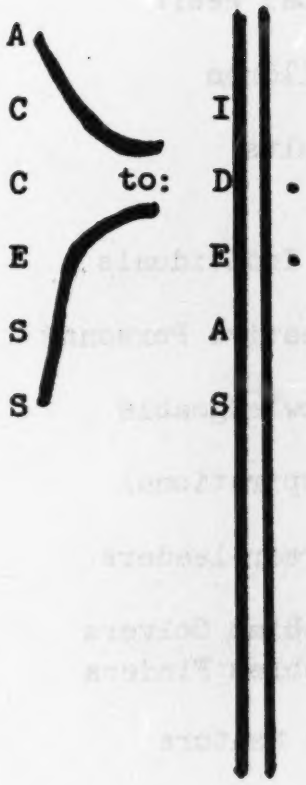
Military Personnel,

Other

*Business, Industry, Music, Literature

Art, Science and Social Science

Figure



1. About:

   1.1 Oneself

   --self concept
   --attitudes
   --aspirations
   --capabilities

   1.2 Nature of Man < Individuals / Groups

   1.3 Nature of Human Institutions

   1.4 Nature of Matter < In Free State / When Combined

   1.5 Nature of Structures < Components / As an Entity

   1.6 Nature of Functions

   1.7 Nature of Relationships

   1.8 Nature of Purpose

2. From:

   2.1 One's own Ideation

   2.2 Other Persons
   --past and present
   --great ideas of mankind
   --creative individuals from all fields

   2.3 Human Institutions
   --educational
   --social
   --economic
   --political
   --religious

   2.4 Books

   2.5 Paintings

   2.6 Music

   2.7 Dance

   2.8 Plays

   2.9 Environment

   2.10 Equipment-material Systems and Devices

   2.11 Audio and Visual Media

Figure IV

ACCESS

MATERIAL	EQUIPMENT
1. Books	1. Slide Projectors
2. Magazines	2. 8 mm Projectors
3. Scholarly Journals	3. Computing devices abacus, calculators, access to computor (Chico State?)
4. Newspapers	4. Tape Recorders
5. Items used in biology chemistry physics and other laboratory work	5. Telescopes, sextants; surveying and mapping equipment
6. Materials needed to build experimental equipment	6. Cameras
7. Art materials: paints, plastic clay; portfolios, prints	7. Meteorological equipment
8. Realia	8. Microscopes
9. Films, filmstrips, charts, maps, blueprints, slides; diagrams	9. Viewers

Question: How can we apply a "Project Discovery" approach to isolated children?

Figure V

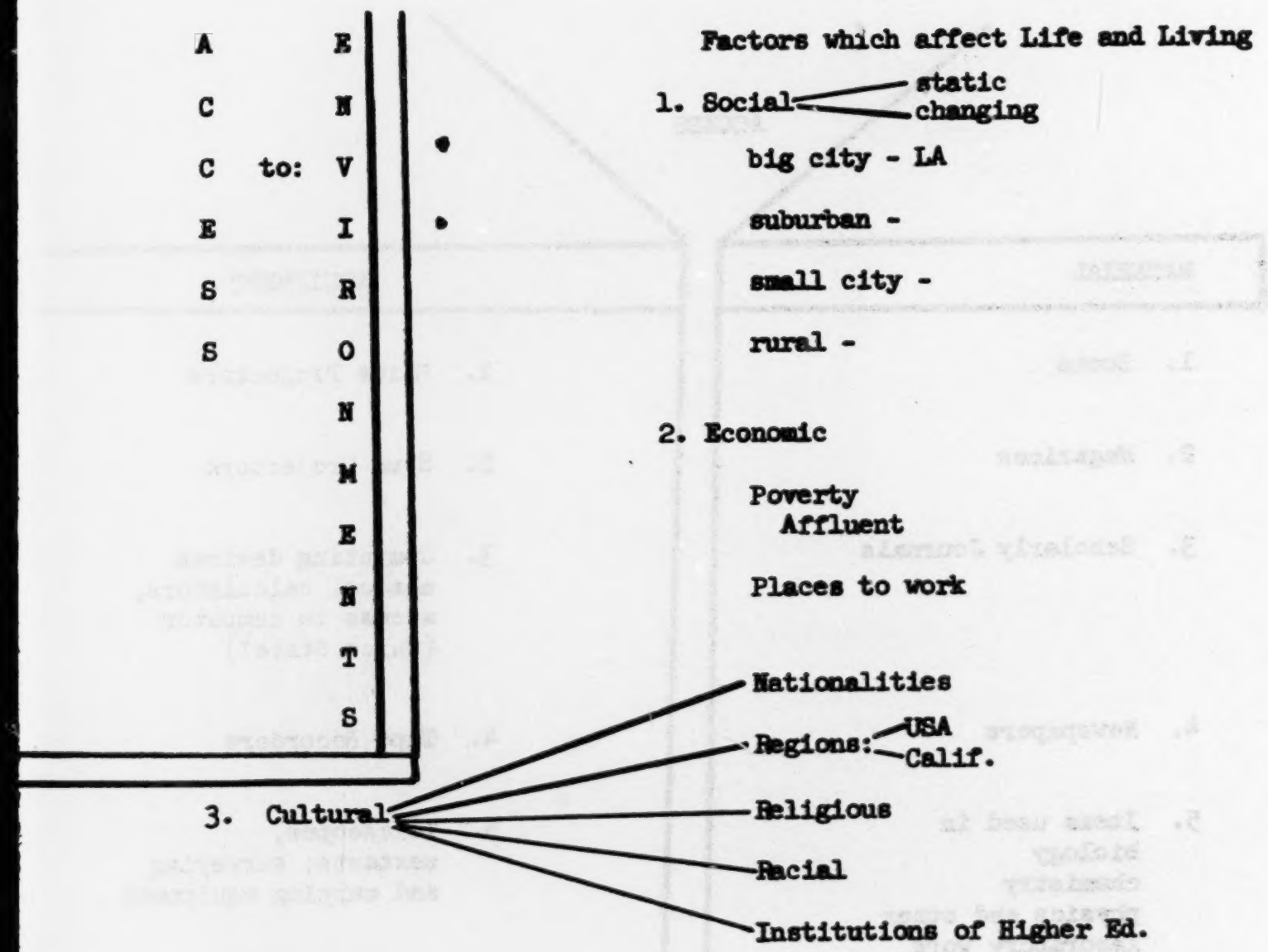
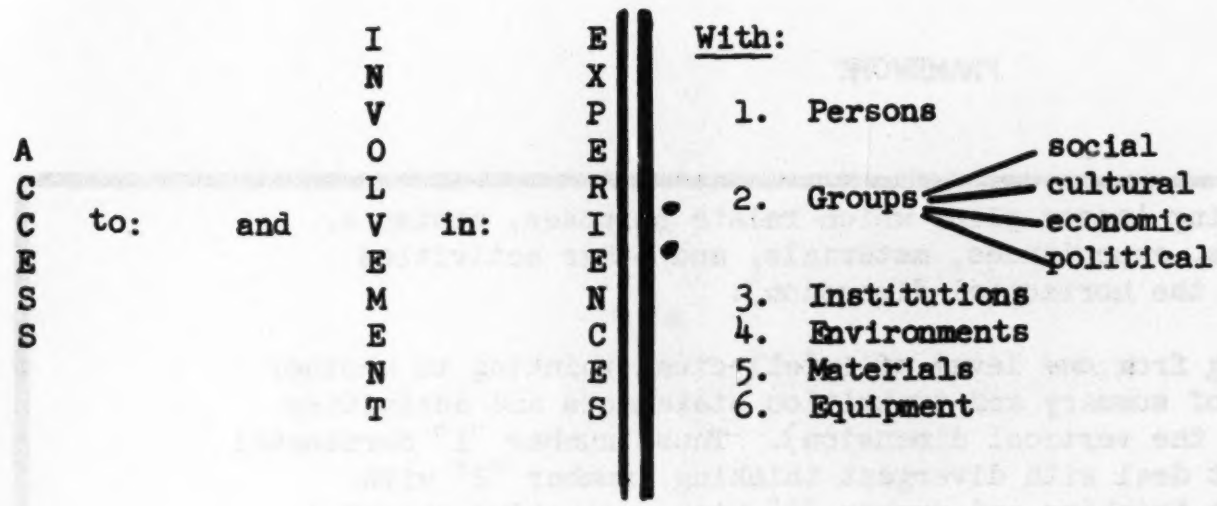

A C C E S S
E N V I R O N M E N T S
to:
Factors which affect Life and Living
1. Social
static
changing
big city - LA
suburban -
small city -
rural -
2. Economic
Poverty
Affluent
Places to work
3. Cultural
Nationalities
Regions:
USA
Calif.
Religious
Racial
Institutions of Higher Ed.
4. Ecological
Ocean
River Valley
Mountain
Desert
Forest
5. Educational
School
Other
6. Much Freedom for Individuals vs. Many Restraints on Individuals
7. Self-Extending and Self-Inhibiting

Figure VI



For the Purpose of:

1. Extending awareness of and generating new

   ideas about
   1.1 oneself-capabilities, aspirations, and areas in need of improvement.
   1.2 social, political, economic, cultural, and other factors affecting individuals and nations.

2. Developing intellectual skills

   2.1 seeing, formulating, and exploring alternative ways of thinking and of acting.
   2.2 acquiring disciplined thinking in logical problem solving.
   2.3 appreciating the great ideas of mankind and relating these to one's personal values and aspirations.

3. Acquiring needed facts and evaluating what ideas, institutions, policies, and actions are valid and which are not valid in terms of individual and societal needs and goals.

4. Becoming a more knowledgeable, creative, and humane person.

Figure VII

FRAMEWORK

1. For planning lesson plans which relate purposes, contents, procedures, experiences, materials, and other activities (shown in the horizontal dimension).

2. For moving from one level of intellectual thinking to another by means of summary and transition statements and activities (shown in the vertical dimension). Thus, number "1" horizontal area might deal with divergent thinking, number "2" with convergent thinking and number "3" with evaluative thinking.

	Specific Purpose	Content	Procedure and Experience	Materials Equipment Resource Persons	Related Activities
1.	(Content and Behavior)		Motivation Guiding Questions Activity Evaluation & Summary Independent Study		Individual Pupil Projects
	Summary and Transition				
	(Statement of major generalizations, attitudes & appreciations, and techniques, skills & work habits leading into new area of study.)				
2.					
	Summary and Transition				
3.					

Figure VIII

Plan: (1) Educational Objectives, (2) Classroom Dialogue, (3) Assignments, (4) Criteria for developing curricular material, and (5) Examination Questions which foster pupil growth in

Higher Intellectual Skills:		Traits of Creativity:
1. Translation	1. Divergent Thinking	1. Sensitivity to Problems
2. Interpretation	2. Convergent Thinking	2. Adaptive Flexibility
3. Extrapolation	3. Evaluation	3. Expressional Fluency
4. Application		4. Originality
5. Analysis	From: Guilford, J. P., "Structure of the Intellect"	
6. Synthesis		Extend Awareness
7. Evaluation		Overcome obstacles to thinking and doing
		Produce Original and Worthwhile Products
From: Bloom et alii, Taxonomy of Educational Objectives: Cognitive Domain		Focus on: 1. Attitudes 2. Processes 3. Persons 4. Products

Figure IX: HIGHER INTELLECTUAL SKILLS AND TRAITS OF CREATIVITY

Factors Which Affect Educational Programs, School Experience, and Development of Human Potential

We can improve the quality of teaching and learning by planning educational objectives, classroom dialog, assignments, criteria for developing curricular materials, and examination questions which stimulate growth or improvement of higher intellectual skills and traits of creativity.

Listed on this chart are certain intellectual skills and certain traits of creativity. Complete the chart indicating which skills and traits receive a major emphasis in stated objectives, classroom dialog, assignments, curricular materials, and examination questions in your gifted child or talent development program.

	Educational Objectives	Classroom Dialog	Assignments	Curricular Materials	Examination Questions
1. Translation					
2. Interpretation					
3. Extrapolation					
4. Application					
5. Analysis					
6. Synthesis					
7. Evaluation					
8. Divergent Thinking					
9. Convergent Thinking					
10. Evaluative Thinking					

	Educational Objectives	Classroom Dialog	Assignments	Curricular Materials	Examination Questions
1. Sensitivity to Problems					
2. Adaptive Flexibility					
3. Expressional Fluency					
4. Originality					
5. Extending Awareness					
6. Overcoming Obstacles to Thinking					
7. Overcoming Obstacles to Doing					
8. Providing New and Worthwhile Products					

1-7 - from The Taxonomy of Educational Objectives: Cognitive Domain by Bloom et alii.
8-10 - from "The Structure of the Intellect" by J. P. Guilford.